

DFO - Library / MPO - Bibliothèque



09078923

Herring Survey Conducted on
Northeast Coast of Newfoundland
June 24- August 1, 1970

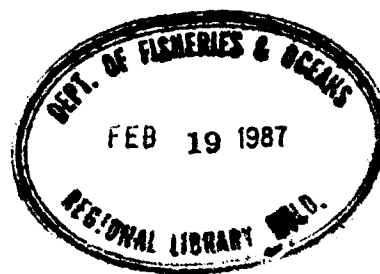
James O'Neill

SH
351
H5
05

HERRING SURVEY CONDUCTED ON NORTHEAST COAST OF NEWFOUNDLAND

JUNE 24 - AUGUST 1, 1970

by James O'Neill



Industrial Development Branch,
Department of Fisheries & Forestry,
St. John's, Newfoundland.

CONTENTS

- (A) Acknowledgements
- (B) Resume of First Part of Contract
- (C) (i) Purpose of contract
 - (ii) Description of boat and gear used
 - (iii) Explanation of search procedure.
- (D) Log Abstract
- (E) Observations and Comments
 - (i) Re: herring survey
 - (ii) Miscellaneous
- (F) Recommendations
- (G) Appendix. Charts showing search areas and locations from where samples were taken.

ACKNOWLEDGEMENTS

The observer would like to acknowledge the constant assistance provided by Messrs. R.A. Prince, M. Barnes and Captain A. Thornhill. The capable and experienced guidance provided by these gentlemen and its continual availability to the observer cannot be over-emphasized.

The observer would also like to take this opportunity to express his sincere appreciation to Captain E.P. Whelan and the crew of the R.V. "H.M.S. " for their invaluable help and co-operation. Without the help of all the above mentioned, the project might well have been an arduous one rather than the pleasant experience it was.

Part B

RESUME OF FIRST PART OF CONTRACT

The first two months of my contract (April 24 - June 25) were spent in the twine loft at the old orthopedic on the General Hospital grounds. During this time, I assisted in the construction and assembly of a cod trap, several shrimp sorting trawls and a number of western trawls.

During this two-month period, I also had an opportunity to spend one day on the M.T. STRAIGHT SHORE which was shrimp fishing in St. Mary's Bay. I was also involved in a project at the College of Fisheries. Approximately 800 lb. of shrimp, caught in St. Mary's Bay, was cooked at the college and peeled by myself and a number of other observers.

In the main, the work done during this period was in preparation for several field projects to be conducted during coming summer months. Although the majority of this time was put in at the twine loft, there were other varied tasks undertaken.

Part C

(i) The purpose of my field work was to observe and report on activities surrounding a herring survey which was to be conducted on the northeast coast of Newfoundland. This survey was to be conducted during July and August, 1970.

(ii) The M.V. MARILYN MARIE, the vessel chartered to conduct this survey, under the pilotage of Captain M.P. Whelan, is a 51 ft. longliner. The boat is equipped with a purse seine and Japanese seining gear. The boat also had two gillnets used for the acquisition of herring samples. These gillnets each measure 18 fathoms in length, 3 fathoms in depth with $2 \frac{5}{8}$ " mesh. The boat is fitted with a vertical echo-sounder or fish-finder and four 1000 wt. underwater attraction lights.

(iii) The search procedure, though it varied from time to time, was generally this: the boat would steam from 3 - 5 knots, zig-zaging both ways to cover a larger area. During this procedure the fish-finder would be in use. (see diagram)

This sketch shows the likely procedure of a search from point A to point B.

Part D

LOG ABSTRACT

June 26

Field work begins. Observer joined M.V. MARILYN MARIE at St. Anthony.

June 27 - July 16

Boat proceeded to Hare Bay where a three-week survey was conducted. Hare Bay was searched in its entirety. During this period, 7 samples of herring, taken in gill nets, were shipped to the Marine Biological Station in St. John's. Samples came from different areas of Hare Bay.

July 17

Boat proceeded to Englee in Canada Bay.

July 17 - 24

Worked Canada Bay as far as Roddickton. Survey yielded two samples which were shipped to St. John's.

July 25

Surveyed area Englee to Williams Port including Hooping Harbour. Took one sample from Williams Port. Proceeded to Harbour Deep. Sighted one large school of mackerel near Williams Port Harbour.

July 26

Surveyed Harbour Deep sighting one school of mackerel. Acquired sample from Harbour Deep and proceeded to Seal Cove in White Bay.

Part D con't.

July 27 - August 2

Worked out of Seal Cove. Surveyed areas from Partridge Point to Hampden and Hampden to Little Harbour Deep. Four herring samples were taken during this period from Southern Arm, Western Arm, Great Cat Arm and Little Coney Arm.

Also during this period (July 28) we sighted 9 schools of mackerel between Lobster Harbour and Partridge Point. These schools were inshore in 20 - 25 fathoms of water.

August 3 - 5

Left Seal Cove enroute to Jacksons Arm. Searched areas Jacksons Arm, Sops Arm and south side of White Bay. Samples were taken from Sops Island, Purbeck Cove, Otter Point and Upper Head. Survey of White Bay completed. Boat left White Bay for Conception Bay.

August 5 - 8

Boat enroute to Conception Bay.

August 9 - 11

Boat tied up at Long Pond undergoing minor repairs. Skipper accompanied Japanese technician to Trinity Bay.

August 12

Left Long Pond to search Conception Bay. Searched areas Kelly's Island, Little Bell Island and south side of Bell Island. No fish found.

Part D con't.

August 13

Resumed search of Conception Bay. Anchored off Kelley's Island and employed underwater lights at night with no success.

August 14

Searched north side of bay from Harbour Grace to Bay de Verde. No fish found. Underwater lights used again tonight with no fish.

August 15 - 16

Boat tied up in Long Pond.

August 17 - 18

Boat enroute to Dildo in Trinity Bay.

August 19 - 20

Boat put in at Dildo Cove. Harboured in Dildo Cove due to strong NE winds (70 m.p.h.).

August 21 - 22

Boat left Dildo and crossed the bay. Searched area. Surveyed Bull Arm to Sunnyside and from Sunnyside to Random Sound but no fish found. At night lowered underwater attraction lights near Little Heart's Ease. Lights failed to attract fish.

August 24

Field work terminated so observer returned to St. John's.

(Complete weekly log reports are on file in the Industrial Development Branch.)

Part E

OBSERVATIONS & COMMENTS

(1) Observations re herring survey.

The survey revealed that in all the areas searched herring were very plentiful but dispersed. It was obvious from catches in our gillnets that the herring were in large numbers. The fish-finder, nevertheless, failed to record any schools of herring. On all occasions when gillnets were set, herring were meshed. Catches ranged from two herring to as high as two hundred herring in two gillnets. In Hare Bay, during the first three weeks in July, catches were relatively small. This scarcity was attributed to the abundance of whales in the bay. Local residents of Hare Bay said that herring are very plentiful in late July and early August. Herring caught in the Canada Bay area were large and again plentiful. The herring taken in this area in late July were mostly spawn.

In the areas of William's Port, Harbour Deep and the entire White Bay area, herring samples were of similar quality. These samples were mostly medium or large size herring of prime texture and quality.

From St. Anthony to the bottom of White Bay, herring were found to be plentiful, scattered and of top quality. From the above-mentioned areas, nineteen (19) samples were taken and shipped to the Marine Biological Station in St. John's for analysis.

Survey work conducted during the last three weeks of August failed to reveal any sign of herring in Conception or Trinity Bays.

Part E con't.

(ii) Miscellaneous observations.

Schools of whales were sighted in Hare Bay during the first weeks of July. These whales were probably feeding on the caplin which were also very plentiful in Hare Bay. Caplin were very dense inshore in shallow water. Commercial salmon and cod fishermen in the area of St. Anthony and Hare Bay experienced a fair season this year. In the area of Hare Bay, the salt water was found to be very dirty. If gillnets were in the water for more than one night, they would become coated with a type of slime which obviously posed certain problems.

The Canada Bay Fish Plant in Englee reported an exceptional season for that area. Fishermen here did quite well with both cod and salmon.

In the White Bay area thirteen schools of mackerel were spotted. These mackerel were small and not fully grown. Between Partridge Point and Lobster Harbour (approximately 5 miles) we sighted nine (9) schools of mackerel. These fish were generally inshore.

This summer several boats from Nova Scotia fished for crabs out of Jacksons Arm. This fishery was a success in as much as the crabs were caught in abundance. There were some problems, however, in keeping the crabs alive until they could be shipped to the mainland for processing. Cod and salmon in this area were plentiful this season. The local fishermen did well.

Boats fishing out of Seal Cove, White Bay, reported a poor season with the exception of turbot, which was quite plentiful.

In Conception and Trinity Bays the cod fishery this season was generally a prosperous one.

Part F

RECOMMENDATIONS

The observer would like to submit the following recommendations drawn from observations regarding a herring survey on the northeast coast of Newfoundland during July and August, 1970.

There is every indication that both herring and mackerel could be fished for commercially on the northeast coast. The distribution of herring on the northeast coast indicates that purse seining in this area would not be feasible. On the one hand, the average fisherman would not be able to afford the type of gear and equipment necessary for purse seining; and on the other hand, herring are not schooled up frequently enough during the season to warrant this type of fishing. Either gillnets or herring traps would have to be employed in this area to benefit the small fisherman and make this fishery a success. The observer feels that traps even more so than gillnets would prove to be quite successful especially in the areas of White Bay and north to Hare Bay.

Another important aspect of a herring and/or mackerel fishery on this coast is the availability of local markets. As it stands now, there is no market on the northeast coast for these fish. If local markets were set up in the form of small packing plants or even one centrally located plant, this type of fishing could be initiated with excellent possibilities. These plants would not have to be extremely elaborate. A relatively simple setup, under strict supervision to ensure a quality product, would serve the purpose adequately.

Part F con't.

With the availability of European markets for herring, the observer feels that a herring fishery on Newfoundland's northeast coast would prove feasible as well as profitable to both the northeast coast fishermen and the Newfoundland economy.

During the first week of August several schools of large tuna were seen in White Bay. Local residents reported that tuna are schooled in White Bay all summer long. It is quite possible that further study of the tuna situation in this area would indicate tourist promotion similar to that in Notre Dame Bay. Certainly this prospect could be explored.

CHART I

● SAMPLES TAKEN FROM
THESE AREAS

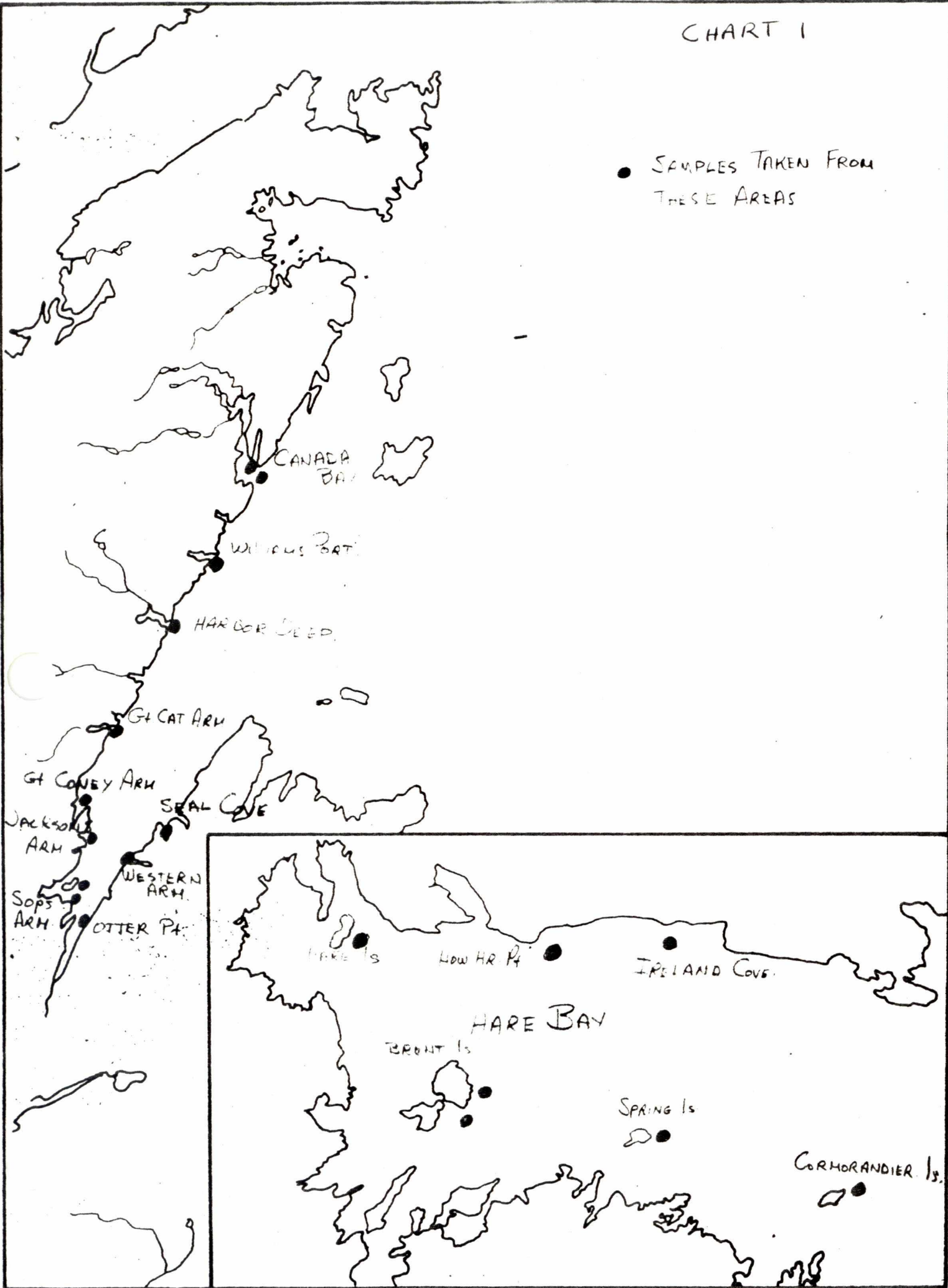
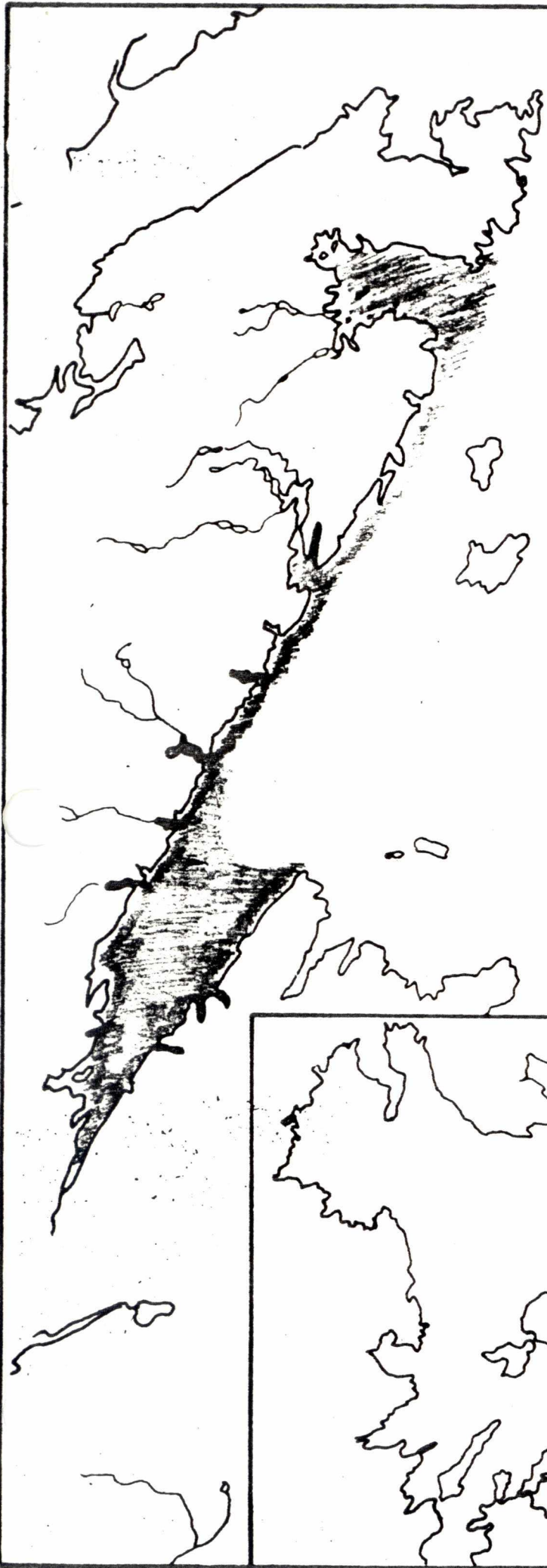

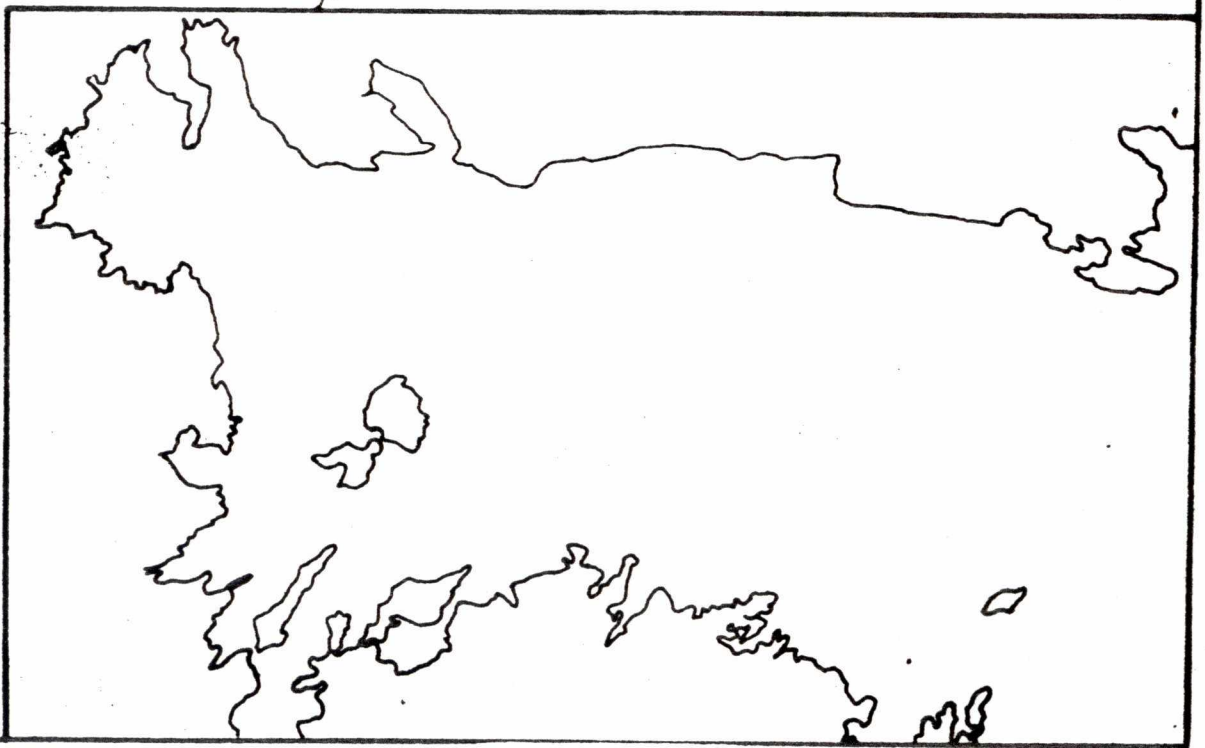
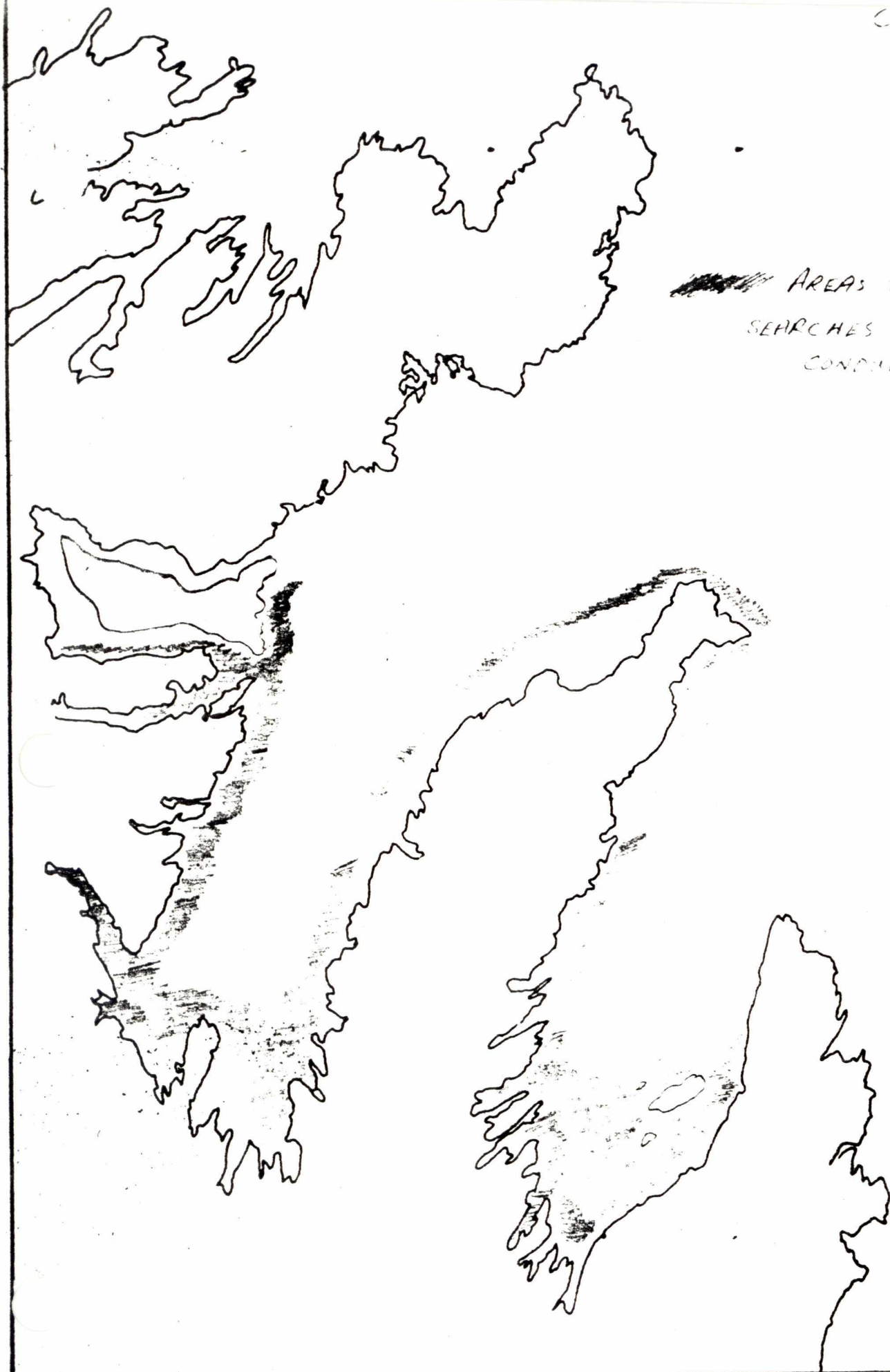


CHART 2



 AREAS WHERE
SEARCHES WERE CONDUCTED





██████ AREAS WHERE
SEARCHES WERE
CONDUCTED